A-3 transmit processor 18 to the modulators 22 used to generate transmit signals $T_1 \ldots T_N$, which are in turn transmitted by transmit antennas 14A ... 14N.

Remarks

The above amendments involve two main areas of correction. First, the changes to pages 8 and 14 correct minor typographical errors. Next, the changes to page 7 correct a minor error to the C_{jk} polynomial. In particular, the final element in the polynomial should be $C_{n-1}z^{-(n-1)}$, which follows the general pattern of the preceding elements.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attachment is captioned **"Version with Markings to Show Changes Made."**

Respectfully submitted,

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CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS DOCUMENT IS BEING DEPOSITED WITH THE UNITED STATE POSTAL SERVICE, ON THE DATE INDICATED, AS FIRST CLASS MAIL, POSTAGE PREPAID, IN AN ENVELOPE ADDRESSED TO: **COMMISSIONER FOR PATENTS, BOX NON-FEE AMENDMENT, WASHINGTON, D.C. 20231**

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"Version with Markings to Show Changes Made"

In the Specification

Please replace the paragraph beginning on line 6 of page 7 with the following paragraph:

Typically, the propagation channel between a given antenna 14 and a given mobile terminal 16 comprises a number of downlink propagation paths. These multiple propagation paths, referred to as multipaths, each have characteristic attenuation, phase, and delay attributes, which may be expressed as a complex coefficient representing magnitude and phase, and a corresponding delay attribute. Thus, channel coefficient C_{jk} may be represented by the polynomial [$C_0 + C_1 z^{-1} + C_2 z^{-2} + \ldots + C_{n-1} z^{n-1}$]

$\underline{C_0 + C_1 z^{-1} + C_2 z^{-2} + \ldots + C_{n-1} z^{-(n-1)}}$, where C_n represents the channel coefficient associated with a single multipath and z^x is a delay operator that represents the unit delay of the various multipaths relative to the first received multipath. The time delay operator could be expressed relative to a multipath other than the first received multipath, in which case the above expression might include channel coefficients with positive delay elements (e.g., $C_x z^{+4}, C_{x-1} z^{+3}$, and so on).

Please replace the paragraph beginning on line 5 of page 8 with the following paragraph:

In this example, the channel estimate matrix is used to generate transmit signals T_1, T_2, and T_3 in such a manner as to allow the same downlink communication channel to be used by multiple mobile terminals 16 operating within the same service area. The transmit signals T_1, T_2, and T_3 comprise weighted combinations of information signals S_1, S_2, and S_3, which are intended for three different mobile terminals. Information signals S_1, S_2, and S_3 are combined such that [at] each mobile terminal 16 receives only its wanted signal, with the unwanted signals (e.g., those intended for the other mobile terminals 16) canceling.

Please replace the paragraph beginning on line 13 of page 14 with the following paragraph:

The IIR processed blocks are then FIR processed by matrix multiplication with the adjoint matrix polynomials to obtain transmit signal blocks. Filter array 32, comprising FIR filters 34, processes the IIR-filtered signals to compensate for interference between signals S_1, S_2 , and S_3 at the mobile terminals 16. Each signal is processed by a corresponding row of FIR filters 34 in the FIR filter array 32. The output signals from FIR filters 34 are summed down filter array columns, indicated by the + sign at the junction of the line from one output to another. These summed outputs represent the baseband combined transmit signals relayed by the transmit processor 18 to the modulators 22 used to generate transmit signals T_1 ... T_N, which are in turn transmitted by transmit antennas 14A ... 14N.